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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/733,040

12/11/2003

Takeshi Nakamura

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03/18/2008

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SUITE 850

MCLEAN, VA 22102

EXAMINER

ENSEY, BRIAN

ART UNIT

PAPER NUMBER

2615

NOTIFICATION DATE

DELIVERY MODE

03/18/2008

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

JKEATING@KBIPLAW.COM

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<b>Office Action Summary</b>	<b>Application No.</b> 10/733,040	<b>Applicant(s)</b> NAKAMURA, TAKESHI	
	<b>Examiner</b> Brian Ensey	<b>Art Unit</b> 2615	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 09 January 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 3,4,6,8-10,13,14,16 and 18-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,5,11,12 and 15 is/are rejected.
- 7) ☒ Claim(s) 7,17 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 11 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Tsuneo Japanese Patent Application Publication 05-103391.

Regarding claims 1 and 11, Tsuneo discloses a speaker system comprising: a main speaker (center speaker 1); and at least one subordinate speaker (peripheral speaker 1); wherein the main speaker and the at least one subordinate speaker are arranged such that a pseudo-spherical wave having the main speaker at a center thereof is generated and the main speaker and at least one subordinate speaker are vibrated in a frequency range of piston vibration and are in phase with each other (inherent since the same signal is simultaneously inputted to all speakers) and a propagation speed of a sound wave produced by vibration of the subordinate speaker is less than a propagation speed of a sound wave produced by vibration of the main speaker (gain setters 3 are set to provide a flat wave in the center with a falling off wave at the periphery thereby producing a propagation speed of the peripheral speakers less than the propagation speed of the main speaker) (See Fig. 1, abstract translation and translation paragraphs 0008-0011).

Regarding claims 2 and 12, Tsuneo further discloses the main speaker and the at least one subordinate speaker are arranged substantially on the same surface of a substrate so as to face in

the same direction and so as not to lie one on top of another and such that the at least one subordinate speaker is vibrated with a smaller amplitude than the main speaker (See Fig. 1 and translation paragraph 0011).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 5 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsuneo in view of North U.S. Patent No. 6,801,631.

Regarding claims 5 and 15, Tsuneo discloses a speaker system as claimed. Tsuneo does not expressly disclose a plurality of the subordinate speakers are provided, the main speaker is disposed in the center, and the subordinate speakers are arranged around the main speaker so as to have the same center. Tsuneo does teach a linear arrangement with all the speakers on a common plane and does not limit the specific arrangement of the speakers. North teaches a uniform speaker arrangement wherein all the speakers lie in a common plane with a center high frequency speaker and surrounding low frequency speakers to maximize the energy lobes towards the user and minimize the energy lobes at the periphery of the user(i.e. producing a pseudo-spherical wavefront) (See Fig. 3 and col. 5, line 54 to col. 6, line 9). Therefore, It would have been obvious to one of ordinary skill in the art at the time of the invention to arrange the

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speakers of Tsuneo in the configuration as taught by North to maximize the pseudo-spherical wavefront perceived by the user.

### ***Response to Arguments***

Applicant's arguments, see pages 9-12, filed 1/9/08, with respect to the rejection(s) of claim(s) 1, 2, 5, 7, 11, 12, 15 and 17 under 35 U.S.C. 101 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Tsuneo PAJ 05-103391 and North U.S. Patent No. 6,801,631.

### ***Allowable Subject Matter***

Claims 7 and 17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian Ensey whose telephone number is 571-272-7496. The examiner can normally be reached on Monday - Friday 6:00 AM - 2:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sinh Tran can be reached on 571-272-7564. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks  
P.O. Box 1450  
Alexandria, Va. 22313-1450

**Or faxed to:**

(571) 273-8300, for formal communications intended for entry and for informal or draft communications, please label "PROPOSED" or "DRAFT".  
Hand-delivered responses should be brought to:

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/Brian Ensey/  
Primary Examiner, Art Unit 2615  
February 29, 2008